REMARKS

These comments are responsive to the Official Action mailed on October 19, 2005, and for which a one-month extension is hereby requested. The Office Action rejected claims 1-3, 5, 7, and 10 under 35 U.S.C. § 102(b) as being anticipated by Fossum et al. (Pat. No. 5,841,126), rejected claims 24 and 25 under 35 U.S.C. § 102(b) as being anticipated by Tsang et al. (Pat. No. 5,900,623), and rejected dependent claims 4, 11, and 12 under 35 U.S.C. § 103(a) with Fossum et al. as the primary reference. For the reasons given below, it is respectfully submitted that these rejections are not well founded and should be withdrawn. Concerning the Office Action's comment on election/restriction, in order to facilitate the application process the following comments are based on the Office Action's determination of what constitutes the first species.

Claim Rejections Under 35 U.S.C. §102

Rejections based on Fossum

Claims 1-3, 5, 7 and 10 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,841,126 to Fossum et al. ("Fossum"). Independent claim 1 includes the final step of:

> clamping, by a clamp circuit, at least one signal selected from the detected electronic signals and the sampled signals in response to a detecting of at least one over-saturation condition;
>
> whereby image inversion is at least partially abated.

For this element, the Office Action cites column 8, lines 9-18, of Fossum. However, this passage only describes the use of a programmable integration time that is set by adjusting the delay between frames. It is respectfully submitted that neither this passage nor, as far as can be determined, elsewhere in Fossum describes or suggests the clamping by a clamp of a signal from either the detected electronic signals or the sampled signal. Thus, Fossum neither teaches nor suggests "clamping, by a clamp circuit, at least one signal selected from the detected electronic signals and the sampled signals" and, in particular, not doing so "in response to a detecting of at least one over-saturation condition"; further, there is no disclosure of such a process resulting in the "image inversion [being] at least partially abated."

Consequently, for at least these reasons, it is respectfully submitted that a rejection of claim 1 along with dependent claims 2-4 based on Fossum is not well founded and should be withdrawn.

Claim 2 is also believed further allowable as it recites the limitation that "the photo detector comprises a photo diode." For this limitation, the Office Action refers to column 7, lines 44-64. This is believed to be incorrect: a careful reading of Fossum shows that what is disclosed (see in particular lines 56-58) is *not* in fact a photo diode, but rather *photogate* operated to *simulate* the readout timing of a photo diode. Thus, Fossum is instead teaching away from actually using a photo diode by instead using a photo gate in a particular mode that simulates a photo diode. Consequently, it is respectfully submitted that a rejection of claim 2 under 35 U.S.C. § 102(b) as being anticipated by Fossum is further believed incorrect on this basis.

Concerning independent claim 5, this end with the step of:

> clamping, by a clamp circuit, signals selected from the image signals and the sampled signals during a phase reset of the correlated double sampler.

For this claim the Office Action cites column 7, lines 44-53, of Fossum for the steps "clamping, by a clamp circuit, signals selected from the image signals and the sampled signals"; however, this passage just gives some general discussion of a particular embodiment and neither teaches nor suggests such a clamping. Further, for the restriction of the clamping occurring "during a phase reset of the correlated double sampler", the Office Action column 8, lines 27-38, of Fossum. This passage of Fossum does refer to correlated double sampling, but there is no discussion of a phase reset and, in particular, there is no disclosure of the described clamping occurring such a phase reset.

Consequently, for at least these reasons, it is respectfully submitted that a rejection of claim 5 along with dependent claim 7 under 35 U.S.C. § 102(b) as being anticipated by Fossum is not well founded and should be withdrawn.

Similarly, for claim 10, this recites "an image sensor array" that includes "a clamp circuit", for which the Office Action cites column 7, lines 44-64, of Fossum. This passage of Fossum again gives some general discussion of a particular embodiment of the device presented there; however, it is again submitted that it neither teaches nor suggests such a clamp circuit and it unclear as to in which part of the cited passage that the Office Action is finding such an element.

Consequently, for at least these reasons, it is respectfully submitted that a rejection of claim 10 along with dependent claims 11 and 12 based on Fossum is not well founded and should be withdrawn.

Rejections based on Tsang

Claims 24-25 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,900,623 to Tsang et al. ("Tsang"). Independent claim 24 includes the limitation of:

> detecting that the first signal is slewing excessively rapidly during the first interval

The Office Action cites column 7, lines 28-67, for this element. This passage does describe a particular embodiment of the device presented by Tsang for reducing fixed noise patterns, but there is no description or suggestion of detecting that a signal is slewing excessively rapidly and it is unclear as to which portion of this cited passage the Office Action would find this element. In particular, neither in the cited passage nor, as far as can be determined, elsewhere does Tsang teach or suggest "detecting that [a] signal is slewing excessively rapidly" and, in particular, there is no suggestion of doing so where the signal is "a first sample of a first signal during a first interval after reset of a photo detector".

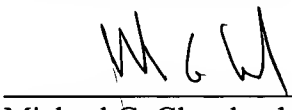
Further, as to the improvement presented in the claim, the Office Action refers to column 13, lines 43-54, of Tsang. This passage does present several features of the design found in Tsang, such as enhanced dynamic range and a clocking scheme; but none of these are the particular improvements presented in claim 24, namely "detecting that the first signal is slewing excessively rapidly during the first interval; and limiting the value of the first sample; whereby the image sensor produces an output of improved accuracy", and are instead complementary ideas which could be combined with, but are independent of, the present invention.

Consequently, for at least these reasons, it is respectfully submitted that a rejection of claim 24 along with dependent claim 25 under 35 U.S.C. § 102(b) as being anticipated by Tsang is not well founded and should be withdrawn.

Conclusion

Accordingly, it is believed that this application is now in condition for allowance and an early indication of its allowance is solicited. However, if the Examiner has any further matters that need to be resolved, a telephone call to the undersigned at 415-318-1160 would be appreciated.

Respectfully submitted,



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